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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/092,558 | 03/08/2002 | Olof Arvidsson | 0104-0386P | 7898 |
| 2292 | 7590 | 05/03/2006 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | PENDLETON, BRIAN T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2615 | |

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|--|--|
| Office Action Summary | Application No. 10/092,558 | Applicant(s) ARVIDSSON, OLOF | |
| | Examiner Brian T. Pendleton | Art Unit 2615 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-19,23-25 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 3,4,20-22 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 2/10/06 have been fully considered but they are not persuasive. Applicant asserts that there was no motivation to combine Sparkes and McKinley. Examiner disagrees with that assertion. The digital signal processor 51 of Sparkes is capable of performing equalization and special effects, but that signal processing is done on a single channel. The rejection is based on the combination of Sparkes and McKinley whereby McKinley would accomplish external processing on the *mixed* audio signal. Applicant argues that the combination fails to teach all elements of the claims. However, the elements to which the Applicant refers as missing from the combination are not explicitly recited in the claims. Claims 1 and 29 do not recite that the receiving unit and satellite unit are different entities and that the satellite unit is positioned at a distance from the receiving unit. An ordinary artisan would not assume such structure from the claim language. In addition, Applicant has not provided any unexpected results from the addition of a "master unit" to the satellite units. As a result, the combination is proper and the rejection maintained.

With regard to Applicant arguments with respect to claim 2, Examiner points to figure 2 of Sparkes which illustrates that the composite signal output of each satellite unit is connected to the composite signal input of the next satellite unit with the exception being the last satellite unit. The combination would obviously have the composite signal output of satellite unit 33 connected to the external processing equipment in McKinley thereby reading on the claims.

Per claim 13, Applicant requests clarification of the Official Notice used in the rejection. Examiner takes Official Notice that digital and analog signal processing techniques were both

Art Unit: 2615

well known at the time of invention. Furthermore, one of ordinary skill in the art would have known the benefits of each technique and applied either one based on his/her needs in an application. If presented with the analog signals of a microphone mixing system, one of ordinary skill in the art would have known to modify Sparkes without undue experimentation.

As to the rejection of claim 15, McKinley discloses that the external processing unit 18 may comprise an equalizer. Obviously equalizers contain variable amplifying circuits.

The limitations of claims 16, 17, and 23 are also met by the combination of the references. It was obvious to balance audio signals and supply cabling between audio processing units.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 8-18, 23, 24, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sparkes, US Patent 4,993,073 in view of McKinley, Jr., US Patent 4,479,240. Sparkes discloses a system for receiving audio signals from a plurality of microphones comprising satellite units 29-33 having a microphone signal input 34-38, composite signal channel input 39-43, and summing means 55 (for satellite unit 30). Sparkes does not disclose a master unit having a composite signal channel input and signal converting means for converting the composite signal into a master signal output. McKinley discloses a audio mixing console comprising a master unit 18 used for adding special effects to a composite site (converting a

Art Unit: 2615

composite signal into a master signal output) for the receiving unit 20. It would have been obvious to one of ordinary skill in the art at the time of invention to modify Sparkes to include the master unit of McKinley for the purpose of adding special effects to the mixed signal, thereby increasing the enjoyment of the sound mixing listening environment. Claims 1, 2, 24, 27, 29, and 30 are met. Regarding claim 8, there is disclosed in column 7 lines 58-60 that the digital signal processor in the satellite unit accomplishes volume control. Per claims 9 and 10, volume control inherently involves attenuation and gain control. As to claim 11, adder 55 adds two signals, therefore inherently superimposing one signal onto another. Per claims 12 and 14, adder 55 is a digital summer. As to claim 13, Examiner takes Official Notice that it was obvious at the time of invention to utilize digital or analog signal processing techniques. Per claim 15, there is obviously an amplifier circuit in the master unit 18 of McKinley. Regarding claim 16, there was an obvious need for power in the master unit, therefore one of ordinary skill in the art would have been motivated to provide a transformer or its equivalent in order to provide power. Per claim 17, balancing was a well known technique in the art of sound mixing in order to convey a specific audio listening environment. As claim 18, all audio signals are able to be reproduced by standard mixing consoles. Per claim 23, the satellite units and master unit are in separate housings in the combination (see column 5 lines 35-40 of Sparkes). Examiner takes Official Notice that it was obvious to connect them with cables. Regarding claim 28, column 8 lines 48-50 disclose that the satellite units supply power to each other.

Claims 5-7, 19, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sparkes in view of McKinley, Jr. as applied to claims 1 above, and further in view of Eastty. The combination of Sparkes and McKinley, Jr. does not disclose at least two common composite

Art Unit: 2615

signal channels. Nevertheless, it was evident at the time of invention that stereo mixing was performed. Eastty discloses a mixing apparatus comprising a stereo pair of microphones 1 for receiving an instrument acoustic signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a stereo pair of microphones in the combination of Sparkes and McKinley, Jr. to enhance the listening experience. A stereo pair of microphones would naturally entail two composite signal channels, two microphone inputs and panning control, which is already taught by Sparkes. As to claims 19 and 25, one of ordinary skill in the art would have been motivated to provide the summed signals of Sparkes to a mixing console, as taught in Eastty, for the purpose of further manipulation of instrument sounds.

Allowable Subject Matter

Claims 3, 4, 20-22, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2615

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (571) 272-7527. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian T. Pendleton
Primary Examiner
Art Unit 2615



btp